

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An apparatus for interacting with a secure resource accessible through a telephone system of the type that provides telephone access through a plurality of extensions, comprising:

a security server having an interface for sending messages to said telephone system, said messages being adapted to provide control signals to said secure resource;

a biometric data store that stores biometric data associated with at least one user;

a biometric data input system coupled to said security server and operable to obtain an utterance from said user; and

a biometric verification/identification system being configured to generate a first confidence level based on a text independent component of said utterance, to access said data store, to evaluate said text independent component of said utterance vis-à-vis said stored biometric data, and to provide instructions to said security server and thereby provide control signals for interacting with said secure resource,

wherein said verification/identification system is adapted to access a data structure storing associations among different types of biometric data and individual ones of said extensions in order to retrieve stored biometric data associated with an extension being operated by a user.

2. (Original) The apparatus of claim 1 wherein said interface is a telephony interface coupled to said telephone system.

3. (Original) The apparatus of claim 1 wherein said interface is an interface coupling said security server with an intermediate system that in turn communicates with said telephone system.

4. (Original) The apparatus of claim 1 wherein said interface is a network interface for communicating messages over a network between said security server and said telephone system.

5. (Original) The apparatus of claim 1 wherein said data store is configured to store biometric data in association with at least one of said plurality of extensions.

6. (Original) The apparatus of claim 1 wherein said biometric data input system is operable to obtain user biometric data from a user operating one of said plurality of extensions.

7. (Original) The apparatus of claim 1 wherein said security system is configurable through training to operate upon biometric data from said user.

8. (Original) The apparatus of claim 1 wherein said security system is configurable through training to operate upon biometric data from said user using training speech provided using said telephone system.

9. (Original) The apparatus of claim 1 wherein said security system includes direct interface for coupling to said secure resource.

10. (Original) The apparatus of claim 9 wherein said direct interface is a wired connection to said secure resource.

11. (Original) The apparatus of claim 9 wherein said direct interface is a network connection communicating with said secure resource.

12. (Original) The apparatus of claim 9 wherein said direct interface is a wireless connection communicating with said secure resource.

13. (Original) The apparatus of claim 1 wherein said biometric data input system is a voice input system.

14. (Original) The apparatus of claim 1 wherein said biometric data input system is a voice input system communicating with said telephone system through at least one of said extensions.

15. (Original) The apparatus of claim 1 wherein said biometric verification/identification system employs a speaker verification/identification system.

16. (Original) The apparatus of claim 1 wherein said biometric verification/identification system automatically determines an extension identifier associated with said one of said plurality of extensions being operated by said user, and uses said extension identifier in accessing said stored biometric data.

17. (Previously Presented) The apparatus of claim 1 wherein said biometric verification/identification system employs a speech recognition system that compares a text dependent component of said utterance with a predefined list of keywords.

18. (Previously Presented) The apparatus of claim 1 wherein said biometric verification/identification system employs a speech recognition system that employs a wordspotting system for identifying keywords within said utterance.

19. (Previously Presented) The apparatus of claim 1 wherein said biometric verification/identification system employs a speaker verification/identification system that assesses at least one text dependent component of said utterance.

20. (Original) The apparatus of claim 1 wherein said security server couples to said telephone system as one of said plurality of extensions

21. (Currently Amended) A method of interacting with a secure resource accessible through a telephone system of the type that provides telephone access through a plurality of extensions, comprising the steps of:

associating said plurality of extensions with a plurality of fixed physical locations;

receiving user biometric data from a user operating one of said extensions;

obtaining user extension information that identifies which one of said fixed physical locations the user is located;

using said extension information and said user biometric data to access a data store containing stored biometric data associated with stored extension information, including accessing a data structure storing associations among different types of biometric data and individual ones of said extensions in order to retrieve stored biometric data associated with an extension being operated by a user;

evaluating said user biometric data vis-à-vis said stored biometric data; and

providing instructions to gain access to interact with said secure resource based on the results of said evaluating step.

22. (Original) The method of claim 21 wherein said biometric data is speech data.

23. (Original) The method of claim 21 wherein said biometric data is speech data provided through said one of said extensions.

24. (Previously Presented) The method of claim 21 wherein said biometric data is speech data and said evaluating step includes determining whether said speech data is associated with said one of said extensions the user is operating.

25. (Original) The method of claim 21 wherein said biometric data is speech data and said evaluating step is performed using a speaker recognition to compare said speech data with a predefined set of keywords.

26. (Original) The method of claim 21 wherein said biometric data is stream of continuous speech data and said evaluating step is performed by wordspotting to identify keywords within said continuous speech data.

27. (Original) The method of claim 21 wherein said biometric data is stream of continuous speech data and said evaluating step is performed by assessing at least one text independent component and at least one text dependent component.

28. (Currently Amended) A method of interacting with a secure resource accessible through a telephone system of the type that provides telephone access through a plurality of extensions comprising the steps of:

receiving an utterance from a user;

using said user biometric data to access a data store containing stored biometric data associated with said user, including accessing a data structure storing associations among different types of biometric data and individual ones of said extensions in order to retrieve stored biometric data associated with an extension being operated by a user;

evaluating a text independent component of said utterance vis-à-vis said stored biometric data and providing instructions to interact with said secure resource based on the results of said evaluating step.

29. (Original) The method of claim 28 further comprising storing biometric data associated with a plurality of users.

30. (New) The apparatus of claim 1, wherein said apparatus is adapted to switch, in response to receipt of an utterance from said user from at least one of said extensions, from a manual entry mode to an automatic entry mode permitting hands-free gaining of access by the user to the secure resource by providing only voice-based data entry, wherein said manual entry mode permits the user to gain access to the secure resource without automated, voice-based user authentication.